



(Red-lined version of amended application) PLANT PATENT

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**APPLICATION FOR UNITED STATES PLANT PATENT**

**for**

**CHRYSANTHEMUM PLANT NAMED 'STELLAR TIME'**

**by**

**Mark Boeder, Koningsplein 41, 2518 J H Den Haag, The Netherlands**

## LATIN NAME OF THE GENUS AND SPECIES

Botanical classification: *Dendranthema grandiflora*.

## VARIETY DENOMINATION

The new Chrysanthemum variety denomination is 'Stellar Time.'

## BACKGROUND OF THE INVENTION

The present invention comprises a new and distinct cultivar of Chrysanthemum botanically known as *Dendranthema grandiflora*, and referred to by the cultivar name 'Stellar Time.'

'Stellar Time,' identified as 20283-0 originated from a cross made by Mark Boeder, in a controlled breeding program in Chichester, West Sussex, United Kingdom. The female parent of the new variety is the variety 'Jewel Time,' and the male parent is the variety known as 'White Diamond,' U.S. Plant Patent No. 8059. The new variety 'Stellar Time' has been asexually reproduced by vegetative cuttings at Chichester, West Sussex, United Kingdom and the distinguishing characteristics are retained through successive generations of asexual reproduction.

## BRIEF SUMMARY OF THE INVENTION

'Stellar Time' is a pot type of Chrysanthemum plant variety having fresh looking white decorative flowers with a yellow centre forming a flat capitulum.

## Comparison with Parent

Plants of the new Chrysanthemum variety 'Stellar Time' are dissimilar to the parent cultivar 'Jewel Time' in plant habitat and growth rate, being slightly more upright and free branching, with different colour flowers. In side-by-side comparisons in Chichester, West Sussex, United Kingdom, under commercial practice, plants of the new Chrysanthemum variety 'Stellar Time' differed from plants of the parent cultivar 'Jewel Time' in the following characteristics.

1. The new variety 'Stellar Time' produces white, flat flowers whereas the parent cultivar 'Jewel Time' produces creamy yellow, slightly reflexing flowers.

2. Plants of the new variety 'Stellar Time' have smaller and shorter inflorescence than plants of the parent cultivar 'Jewel Time.'
3. On average the new variety 'Stellar Time' has a longer response time of about 7 days compared to 'Jewel Time.'
- 5 4. 'Stellar Time' has darker green foliage compared to 'Jewel Time.'

#### Comparison with Other Varieties

Plants of the new Chrysanthemum variety 'Stellar Time' are dissimilar to the cultivar 'Surf' (U.S. Plant Patent No. 4585) in plant habitat and growth rate. However, in side-by-side comparisons in Chichester, West Sussex, United Kingdom, under commercial practice, plants of the new Chrysanthemum variety 'Stellar Time' differed from plants of the cultivar 'Surf' in the following characteristics.

- 15 1. The new variety 'Stellar Time' produces white, flat flowers with a green centre, whereas the cultivar 'Surf' produces white, slightly reflexing flowers.
2. Plants of the new variety 'Stellar Time' have smaller and shorter inflorescence than plants of the parent cultivar 'Surf.'
3. 'Stellar Time' has a longer response time of about three days compared to the variety 'Surf.'

#### BRIEF DESCRIPTION OF ILLUSTRATIONS

Typical specimens of the plant and flowers for the new Chrysanthemum variety 'Stellar Time' are shown in the accompanying photograph. The colours shown are as true as possible within the usual limits of this kind of illustration. Figure 1 is a whole plant view of the new variety 'Stellar Time' grown in a pot. The plant shown in the illustration is 58 days from start of Short Days.

#### DETAILED BOTANICAL DESCRIPTION

The following description of the new Chrysanthemum variety 'Stellar Time' is of plants grown in a greenhouse in Chichester, West Sussex, United Kingdom in the month of August. The cultivar has not been observed under all possible environmental conditions. The phenotype may vary significantly with variations in the environment such

as temperature, length of day and light intensity, without any variance in genotype. The commercial classification of the new variety is a pot Chrysanthemum.

Plants of the new variety have been grown successfully under temperature  
5 conditions averaging about 18°C at night and about 24°C to 25°C during the day under  
light conditions of about 5,000 to 6,000 foot candles. The plants respond well to the use  
of growth retardant, such as two B9 treatments at about 2000 ppm. To produce a  
commercial product the plants may be pinched once with the centre bud removed. The  
typical container size for commercial growth is 14cm. It has been observed that the shelf  
10 life of the new variety is about 24 days with a response time of about 8 weeks. The new  
variety is suitable for growth in a temperature range of 16°C to 25°C.

The new variety may be produced as a Spray and disbud. The following  
description is with respect to a plant produced as Spray pot Chrysanthemums. In the  
15 description of this new Chrysanthemum variety, colour values have been taken from the  
Royal Horticultural Society Colour Chart (R.H.S.C.C.).

#### Plant

Plant type: Pot  
20 Habit: Upright and branching  
Height: Medium 18 to 20cm  
Width: Near 26cm  
Branching characteristics: Upright and spreading  
Length of Lateral Branches: 8 to 12cm  
25 Number of Breaks from Pinch: 4 to 5  
Stem Colour: 147 B  
Response Time: 52 days  
Vigour: Medium  
Shelf Life: Near 24 days

Disease (susceptibility or resistance): ~~No observations~~ None observed

Pest (susceptibility or resistance): ~~No Observations~~ None observed

Drought or temperature resistance: None observed

Growth retardant type and treatment: B9 85% 2 applications of 2 gram/litre at 2 days,  
5 21 days after propagating unrooted vegetative cuttings.

The plants were grown for two weeks in Long Day conditions (20 hours of light) and then transferred to Short Day conditions (13 hours of dark).

10 Propagation:

*Type*: Vegetative propagation via stem cuttings

*Time to rooting*: 12 – 14 days with soil temperatures of 18°C

*Rooting habit*: Fine and fibrous

#### Foliage

15 Number of Leaves per Lateral Branch: 7 to 10

Compound or single: Single

Arrangement of Leaves: Alternate

Shape of Leaf: Typically 5 lobed, oblong ovate

Size of Leaf: *Width* (cm): Near 5cm *Length* (cm): Near 10cm

20 Leaf Apex: Acute/Rounded

Base: Obtuse

Attachment: Petioled

Aspect: Slightly undulating

Margin: Palmately lobed

25 Surface characteristics: *Top*: Pubescent

*Bottom*: Pubescent

Petiole: *Colour*: Near 137 B

*Length:* Near 2cm

Venation: Net, prominent midvein under side.

*Colour: upper side:* Near 147 D

*under side:* Near 147 C

- 5    *Colour:*        Mature Leaf, *upper side:* Near 137 A; *under side:* Near 137 B  
                      Young Leaf, *upper side:* Near 137 A; *under side:* Near 137 C

#### Flower

Flower Appearance: Flat, circular

Flower type: Decorative

- 10    Flower Form: Flat

Flower shape: Circular

Flower Habit: Upright

Number of blossoms per branch: 3 to 5

Inflorescence form: Cyme

- 15        Depth of fully expanded blossoms: Near 2 to 2½cm  
            Diameter of fully expanded blossoms: Near 5 to 8cm

#### ~~Sepals~~Phyllaries:

- 20        *Number:* 19 to 23  
            *Colour:* Near 137 A  
            *Length:* Near 1.3cm  
            *Width:* Near 0.2cm  
            *Texture/Appearance:* Pubescent

- 25    Peduncles: Peduncle length is shortest at the terminal flower and progressively longer moving down the stem; longest length is on average 10cm; shortest length on average 6cm.

- 30        *Length:* 8cm  
            *Colour:* Near 137 B  
            *Surface:* Pubescent  
            *Habit:* Slightly undulating  
            *Strength:* Medium

Pedicel:

- 5            *Length*: Terminal: Near 4cm;    Lateral: Near 6cm  
             *Colour*: Near 137 B  
             *Surface*: Pubescent  
             *Habit*: Slightly undulating  
             *Strength*: Medium

Ray Florets:

- 10           *Form/Shape*: Straight, elliptic  
             *Texture/Appearance*: Matte  
             *Number per flower*: 200 to 220  
             *Length*: 1½ to 2.8cm; *Width*: 0.4 to 0.8cm  
             *Apex*: Round  
15           *Base*: Tapered  
             *Margin*: Entire

Disc florets:

- 20           *Form/Shape*: Cylindrical  
             *Texture/Appearance*: Shiny  
             *Number per flower*: 8 to 10  
             *Length*: Near 0.2 to 0.3cm; *Width*: 0.05 to 0.1 cm  
             *Diameter of disc*: Near 0.3cm

Fragrance: Slight

Flower Bud (at onset of colour):

- 25           *Length*: Near 0.7cm  
             *Diameter*: Near 1.1cm  
             *Form/shape*: Spherical

General flower colour: White

1.        Ray florets, *upper side*:  
30                    *Immature*: Near 4 C  
                      *Mature*: Near 155 D  
                      *Older/Fading*: Near 155 B
2.        Ray florets, *under side*:  
35                    *Immature*: Near 4 C  
                      *Mature*: Near 155 D

Older/Fading: Near 155 B

3. Disc florets:

*Immature:* Near 8C

*Mature:* Near 138 D

*Older/Fading:* Near 8 C

4. Bud: Near 138 A.

Flower progression: Flowers slightly cup and reflex, also slightly fade, during ageing.

Reproductive Organs

Ray Florets: Pistillate

*Pistil number:* 100 +

*Stigma colour:* Near 6 C

*Stigma shape:* Forked

*Style Colour:* Near 6 C

*Style Length:* Near 0.5cm

Disc Florets: Pistillate

*Pistil number:* Near 2

*Stigma colour:* Near 6 C

*Stigma shape:* Forked

*Style Colour:* Near 6 C

*Style Length:* Near 0.1 to 0.2cm

*Staminate:* no observation

Gynoecium: Present on both Ray and Disc florets

*Pistil number on Ray florets:* 100 +

*Pistil number on Disc florets:* Near 2

*Stigma colour:* Near 6 C

*Stigma shape:* Forked

*Style colour:* Near 6 C

*Style length on Ray florets:* Near 0.5cm

*Style length on Disc florets:* Near 0.1 to 0.2cm

Androecium: Not observed

Fruit and Seeds: None observed